

Appl. No. 09/881,473
Atty. Docket No. 6798MD
Amd. dated March 24, 2004
Reply to Office Action of September 25, 2003

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1. (*Currently Amended*) A macroscopically three-dimensional cleaning sheet having a first outward surface and a second outward surface, wherein at least one of the outward surfaces has a macroscopic three dimensional texture, said macroscopic three dimensional texture being defined by peaks and valleys such that said textured outward surface has an Average Peak to Peak Distance of at least about 1 mm, an Average Height Differential of at least about 1 mm and a Surface Topography Index from about 0.01 to about 10 and wherein said cleaning sheet comprises an additive applied at a low effective level to provide improved adhesion of soil to the sheet.

Claim 2-3 (*Cancelled*)

Claim 4. (*Currently Amended*) The cleaning sheet of Claim [[3]] 1 wherein said Average Height Differential is from about 1 mm to about 3 mm.

Claim 5. (*Previously Presented*) The cleaning sheet of Claim 1 wherein said Average Peak to Peak Distance is at least about 2 mm.

Claim 6. (*Previously Presented*) The cleaning sheet of Claim 5 wherein said Average Peak to Peak Distance is at least about 3 mm.

Claim 7. (*Previously Presented*) The cleaning sheet of Claim 1 wherein said Average Peak to Peak Distance is from about 1 to about 20 mm.

Claim 8. (*Previously Presented*) The cleaning sheet of Claim 7 wherein said Average Peak to Peak Distance is from about 4 to about 12 mm.

Claim 9. (*Previously Presented*) The cleaning sheet of Claim 1 wherein said Surface Topography Index is from about 0.1 to about 5.

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Claim 10. (*Previously Presented*) The cleaning sheet of Claim 9 wherein said Surface Topography Index is from about 0.2 to about 3.

Claim 11. (*Previously Presented*) The cleaning sheet of Claim 10 wherein said Surface Topography Index is from about 0.3 to about 2.

Claim 12. (*Currently Amended*) The cleaning sheet of claim 1 wherein said textured outward surface has an Average Peak to Peak Distance of from about 3 mm to about 16 mm, a Surface Topography Index of from about 0.1 to about 5, and an Average Height Differential of from about ~~[[0.5]]~~ 1 mm to about ~~[[6]]~~ 3 mm.

Claim 13. (*Original*) The cleaning sheet of Claim 12 wherein said cleaning sheet is a hydroentangled cleaning sheet.

Claim 14. (*Currently Amended*) The cleaning sheet of claim 1 wherein said textured outward surface has an Average Peak to Peak Distance of from about 4 mm to about 12 mm, a Surface Topography Index of from about 0.2 to about 3, and an Average Height Differential of from about 1 mm to about 3 mm.

Claim 15. (*Original*) The cleaning sheet of Claim 14 wherein said cleaning sheet is a hydroentangled cleaning sheet.

Claim 16. (*Original*) The cleaning sheet of Claim 1 wherein said cleaning sheet is a hydroentangled cleaning sheet.

Claim 17. (*Cancelled*)

Claim 18. (*Previously Presented*) The cleaning sheet of Claim 1 wherein said additive is included at an add-on level of at least about 0.01%, by weight of the sheet.

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Claim 19. (*Currently Amended*) The cleaning sheet of Claim 18 wherein said additive is included at an add-on level of at least about 1%, by weight of the sheet.

Claim 20. (*Currently Amended*) The cleaning sheet of Claim 19 wherein said additive is included at an add-on level of from about 1 to about 15%, by weight of the sheet.

Claim 21. (*Currently Amended*) The cleaning sheet of Claim 20 wherein said additive is included at an add-on level of from about 3 to about 10%, by weight of the sheet.

Claim 22. (*Previously Presented*) The cleaning sheet of Claim 1 wherein the additive is a mixture of mineral oil and a wax.

Claim 23. (*Currently Amended*) A macroscopically three-dimensional cleaning sheet having a first outward surface and a second outward surface, wherein at least one of the outward surfaces has a macroscopic three dimensional texture, said macroscopic three dimensional texture being defined by peaks and valleys such that said textured outward surface has (i) an Average Peak to Peak Distance of from about 1 mm to about 20 mm; (ii) a Surface Topography Index from about 0.2 to about 3; and (iii) an Average Height Differential of at least about [[0.5]]_1 mm and wherein said cleaning sheet comprises an additive applied at a low effective level to provide improved adhesion of soil to the sheet.

Claim 24. (*Previously Presented*) The cleaning sheet of Claim 23 wherein said Average Peak to Peak Distance is from about 4 to about 12.

Claim 25. (*Previously Presented*) The cleaning sheet of Claim 23 wherein said Surface Topography Index is from about 0.3 to about 2.

Claim 26. (*Cancelled*)

Claim 27. (*Currently Amended*) A macroscopically three-dimensional, hydroentangled, nonwoven cleaning sheet for removing dust from a surface, said cleaning sheet comprising at least two fibrous layers; wherein said fibrous layers are hydroentangled

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with each other; wherein said cleaning sheet has a first outward surface and a second outward surface, wherein at least one of said outward surfaces has a macroscopic three dimensional texture, said macroscopic three dimensional texture being defined by peaks and valleys such that said textured outward surface has an Average Peak to Peak Distance of from about 3 to about 16 mm, a Surface Topography Index from about 0.1 to about 5, and an Average Height Differential of ~~from about 0.5 to about 6 mm~~ at least about 1 mm and wherein said cleaning sheet comprises an additive selected from the group consisting of surfactant, wax, oil, and mixtures thereof; wherein said additive is included on said cleaning sheet at a level of from about 0.1% to about 25% by weight of said cleaning sheet.

Claim 28. *(Original)* The cleaning sheet of Claim 27 wherein said cleaning sheet further comprises a scrim material; wherein said fibrous layers are hydroentangled with said scrim material.

Claim 29. *(Original)* The cleaning sheet of Claim 28 wherein said scrim material is made of a material selected from the group consisting of polyethylene, polypropylene, copolymers of polyethylene, copolymers of polypropylene, poly(butylene terephthalate), polyethylene terephthalate, nylon, and mixtures thereof.

Claim 30. *(Original)* The cleaning sheet of Claim 29 wherein said scrim material is made of polypropylene.

Claim 31. *(Cancelled)*

Claim 32. *(Previously Presented)* The cleaning sheet of Claim 27 wherein said additive is selected from the group consisting of wax, oil, and mixtures thereof.

Claim 33. *(Original)* The cleaning sheet of Claim 32 wherein said additive is a mixture of wax and oil.

Claim 34. *(Original)* The cleaning sheet of Claim 33 wherein said mixture of wax and oil contains a ratio of said wax to said oil of from about 3:7 to about 99:1.

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Claim 35. *(Original)* The cleaning sheet of Claim 27 wherein said fibrous layers comprise fibers made of a material selected from the group consisting of natural cellulosic fibers, polyolefins, polyesters, polyamides, synthetic cellulosic fibers, cotton fibers, and mixtures thereof.

Claim 36. *(Original)* The cleaning sheet of Claim 35 wherein said fibers are made of polyester.

Claim 37. *(Currently Amended)* A macroscopically three-dimensional, hydroentangled, nonwoven cleaning sheet for removing dust from a surface, said cleaning sheet comprising at least two fibrous layers and a scrim material; wherein said fibrous layers are hydroentangled with said scrim material; wherein said cleaning sheet has a first outward surface and a second outward surface, wherein at least one of said outward surfaces a macroscopic three dimensional texture, said macroscopic three dimensional texture being defined by peaks and valleys such that said textured outward surface has an Average Peak to Peak Distance of from about 3 to about 16 mm, a Surface Topography Index from about 0.1 to about 5, and an Average Height Differential of from about ~~[[0.5]]~~ 1 to about ~~[[6]]~~ 3 mm and wherein said cleaning sheet comprises an additive selected from the group consisting of surfactant, wax, oil, and mixtures thereof; wherein said additive is included on said cleaning sheet at a level of from about 4% to about 8% by weight of said cleaning sheet.

Claim 38. *(Cancelled)*

Claim 39. *(Previously Presented)* The cleaning sheet of Claim 37 wherein said additive is selected from the group consisting of wax, oil, and mixtures thereof.

Claim 40. *(Original)* The cleaning sheet of Claim 37 wherein said fibrous layers comprise fibers made of a material selected from the group consisting of natural cellulosic fibers, polyolefins, polyesters, polyamides, synthetic cellulosic fibers, cotton fibers, and mixtures thereof.

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Claim 41. *(Original)* The cleaning sheet of Claim 40 wherein said fibers are made of polyester.

Claim 42. *(Original)* The cleaning sheet of Claim 37 wherein said scrim material is made of a material selected from the group consisting of polyethylene, polypropylene, copolymers of polyethylene, copolymers of polypropylene, poly(butylene terephthalate), polyethylene terephthalate, nylon, and mixtures thereof.

Claim 43. *(Original)* The cleaning sheet of Claim 42 wherein said scrim material is made of polypropylene.

Claim 44. *(Original)* A cleaning implement comprising:

- a. a handle; and
- b. a removable cleaning sheet, wherein said cleaning sheet is the cleaning sheet of Claim 1.

Claim 45. *(Original)* A cleaning implement comprising:

- a. a handle; and
- b. a removable cleaning sheet, wherein said cleaning sheet is the cleaning sheet of Claim 12.

Claim 46. *(Original)* A cleaning implement comprising:

- a. a handle; and
- b. a removable cleaning sheet, wherein said cleaning sheet is the cleaning sheet of Claim 14.

Claim 47. *(Original)* A cleaning implement comprising:

- a. a handle; and
- b. a removable cleaning sheet, wherein said cleaning sheet is the cleaning sheet of Claim 23.

Claim 48. *(Original)* A cleaning implement comprising:

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- a. a handle; and
- b. a removable cleaning sheet, wherein said cleaning sheet is the cleaning sheet of Claim 27.

Claim 49. *(Original)* A cleaning implement comprising:

- a. a handle; and
- b. a removable cleaning sheet, wherein said cleaning sheet is the cleaning sheet of Claim 37.

Claim 50. *(Original)* A method for removing dust from a surface, said method comprising the step of contacting said surface with the cleaning sheet of Claim 1.

Claim 51. *(Original)* A method for removing dust from a surface, said method comprising the step of contacting said surface with the cleaning sheet of Claim 12.

Claim 52. *(Original)* A method for removing dust from a surface, said method comprising the step of contacting said surface with the cleaning sheet of Claim 14.

Claim 53. *(Original)* A method for removing dust from a surface, said method comprising the step of contacting said surface with the cleaning sheet of Claim 23.

Claim 54. *(Original)* A method for removing dust from a surface, said method comprising the step of contacting said surface with the cleaning sheet of Claim 27.

Claim 55. *(Original)* A method for removing dust from a surface, said method comprising the step of contacting said surface with the cleaning sheet of Claim 37.

Claim 56. *(Previously Presented)* The cleaning sheet of claim 1 wherein said additive is a microcrystalline wax.

Claim 57. *(Previously Presented)* The cleaning sheet of claim 23 wherein said additive is a microcrystalline wax.

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Claim 58. (*Currently Amended*) The cleaning sheet of claim 27 wherein said additive is a microcrystalline wax applied on at least one of said outward surfaces at a level of from about 0.1% to about 25% by weight of said cleaning sheet.

Claim 59. (*Previously Presented*) The cleaning sheet of claim 58 wherein said microcrystalline is applied to said textured outward surface.

Claim 60. (*Currently Amended*) The cleaning sheet of claim 37 wherein said additive is a microcrystalline wax applied to at least one of said outward surfaces at a level of from about 0.1% to about 25% by weight of said cleaning sheet.

Claim 61. (*Currently Amended*) The cleaning sheet of claim 60 wherein said microcrystalline wax is applied to said textured outward surface.

Claim 62. (*Previously Presented*) The cleaning sheet of claim 37 wherein said scrim material is shrinkable such that said three-dimensional texture is formed on at least one of said outward surfaces when said hydroentangled cleaning sheet with said shrinkable scrim material is heated.

Claim 63. (*New*) The cleaning sheet of claim 7 wherein said Average Height Differential is between about 1 mm and about 3 mm.

Claim 64. (*New*) The cleaning sheet of claim 1 wherein said Average Height Differential is at least about 1.5 mm.

Claim 65. (*New*) The cleaning sheet of Claim 64 wherein said additive is included at an add-on level of at least about 0.01%, by weight of the sheet.

Claim 66. (*New*) The cleaning sheet of Claim 65 wherein said additive is selected from the group consisting of wax, oil, and mixtures thereof.

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Claim 67. (New) The cleaning sheet of claim 27 wherein said Average Height Differential is between about 1 mm and about 3 mm.

Claim 68. (New) The cleaning sheet of claim 27 wherein said Average Height Differential is at least about 1.5 mm.

Claim 69. (New) The cleaning sheet of claim 37 wherein said Average Height Differential is at least about 1.5 mm.

Claim 70. (New) A macroscopically three-dimensional cleaning sheet having a first outward surface and a second outward surface, wherein at least one of the outward surfaces has a macroscopic three dimensional pattern, said macroscopic three dimensional pattern being defined by peaks and valleys such that said patterned outward surface has an Average Height Differential of at least about 1 mm.

Claim 71. (New) The cleaning sheet of Claim 70 wherein said Average Height Differential is at least about 1.5 mm.

Claim 72. (New) The cleaning sheet of Claim 70 wherein said Average Height Differential is from about 1 mm to about 3 mm.

Claim 73. (New) The cleaning sheet of Claim 70 wherein said patterned outward surface has an a Surface Topography Index from about 0.01 to about 10.

Claim 74. (New) The cleaning sheet of Claim 73 wherein said Surface Topography Index is from about 0.1 to about 5.

Claim 75. (New) The cleaning sheet of Claim 74 wherein said Surface Topography Index is from about 0.2 to about 3.

Claim 76. (New) The cleaning sheet of Claim 75 wherein said Surface Topography Index is from about 0.3 to about 2.

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Claim 77. (*New*) The cleaning sheet of Claim 70 wherein said cleaning sheet further comprises an additive to provide improved adhesion of soil to the sheet, wherein said additive is included at an add-on level of at least about 0.01%, by weight of the sheet.

Claim 78. (*New*) The cleaning sheet of Claim 77 wherein said additive is included at an add-on level of from about 1 to about 15%, by weight of the sheet.

Claim 79. (*New*) The cleaning sheet of Claim 77 wherein said cleaning sheet comprises at least two fibrous layers and a scrim material; wherein said fibrous layers are hydroentangled with said scrim material.

Claim 80. (*New*) The cleaning sheet of Claim 79 wherein said scrim material is made of a material selected from the group consisting of polyethylene, polypropylene, copolymers of polyethylene, copolymers of polypropylene, poly(butylene terephthalate), polyethylene terephthalate, nylon, and mixtures thereof.

Claim 81. (*New*) The cleaning sheet of Claim 77 wherein said additive is selected from the group consisting of wax, oil, and mixtures thereof.

Claim 82. (*New*) A cleaning implement comprising:
a. a handle pivotably connected to a support head; and
b. a disposable cleaning sheet removably attachable to said support head ,
wherein said cleaning sheet is the cleaning sheet of Claim 70.

Claim 83. (*New*) A method for removing dust from a surface, said method comprising the step of contacting said surface with the cleaning sheet of Claim 70.